

REMARKS

This Application has been carefully reviewed in light of the Office Action mailed March 17, 2004. At the time of the Office Action, Claims 1-21 were pending in this Application. Claims 1-14 were rejected and Claims 15-21 were allowed by the Examiner.

Rejections under 35 U.S.C. § 102

Claim 1 stands rejected by the Examiner under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 4,864,228 issued to Neil Richardson ("Richardson").

Claim 1 has been cancelled.

Rejections under 35 U.S.C. §103

Claims 1-14 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,026,988 issued to Marcus H. Mendenhall et al. (hereafter "Mendenhall et al.") and in view of Richardson.

Claims 1 - 14 have been cancelled.

Amendments to Allowed Claims

Claim 15 has been amended to recite the embodiment having an SEES (foil), detector, and grid for detecting start electrons. The terminology for the SEES (secondary electron emission surface) is supported on page 6, lines 17-19.

Claim 20 recites that the calibration unit operates in accordance with a secondary electron emission curve. This is the curve of Figures 2 and 4, and the terminology for the curve is supported on page 10, lines 23-25.

New Claims

The new claims are fully supported by the detailed description.

Claim 22 recites control of the voltage applied to the grid in accordance with the secondary electron emission curve. This is supported on page 8, lines 20-28. The curve of Figures 2 and 4 is defined as a "secondary electron emission curve" on page 10, lines 23-25.

Claim 23 recites that the secondary electron emission surface is a foil. This is supported on page 6, lines 17-19.

Claim 24 recites multiple start channels. This embodiment is described on page 11, lines 1 - 10.

Claims 25-34 are method claims corresponding to the start detector embodiment of Claim 1. Calibration methods are discussed on page 9, line 27, through page 10, last line.

Claims 35-37 are apparatus and method claims for the embodiment having an SEES (foil), detector, and grid for detecting stop electrons. This embodiment is described on page 9, lines 8 - 18.

Claims 38-41 are apparatus and method claims for an embodiment having an SEES (foil), detector, and grid for detecting start electrons, as well as a second SEES (foil), detector, and grid for detecting stop electrons. This embodiment is described on page 11, lines 11-18.

CONCLUSION

Applicant has made an earnest effort to place this case in condition for examination and allowance. Applicant respectfully requests reconsideration of the application and allowance of all pending claims.

Applicant encloses herein our check in the amount of \$165.00 to cover the fees for the additional claims. The Commissioner is hereby authorized to charge any additional fees to Deposit Account No. 50-2148 of Baker Botts L.L.P. in order to effectuate this filing.

If there are any matters concerning this Application that may be cleared up in a telephone conversation, please contact Applicant's attorney at 512.322.2634.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Ann C. Livingston", is written over a rectangular area with a light gray grid pattern.

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